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JAPANESE PATENT OFFICE

## PATENT ABSTRACTS OF JAPAN

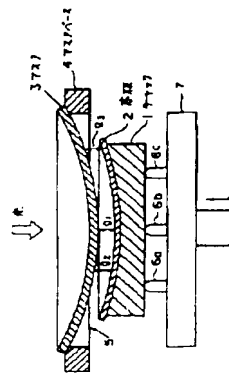
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**H01L 21/027**(21) Application number: **02273451**(22) Date of filing: **15.10.90**(71) Applicant: **HITACHI ELECTRON ENG CO LTD**(72) Inventor: **YOSHITAKE HIROSHI****(54) LARGE-SIZED SUBSTRATE EXPOSURE DEVICE****(57) Abstract.**

**PURPOSE:** To deflect a large-sized substrate, which is held on the top surface of a chuck, in a concave surface shape, and to make the gap between the substrate and a mask equal between the center part and peripheral part and uniform the gap on the whole by forming the top surface of the chuck in a concave surface shape corresponding to the quantity of downward deflection of the mask which is supported on a mask base.

**CONSTITUTION:** The top surface of the chuck 1 is formed in the concave surface shape corresponding to the quantity of downward deflection of the mask 3 supported on the mask base 3. When the large-sized substrate 2 is held on the top surface of the chuck 1 by air suction, etc., the substrate 2 deflects in the concave surface shape conforming with the shape of the top surface of the chuck 1 since the substrate 2 is relatively thin. While the large-sized mask 3 is supported on the mask base 4, the large-sized substrate 2 is held on the top surface of the chuck 1, and a support member 7 is elevated and also properly adjusted in inclination by three tilt mechanisms 6a - 6c, and positioned so that the gap between the substrate 2 and mask 3 reaches a specific value. At this time, the substrate 2 deflects in the concave surface shape corresponding to the quantity of downward deflection of the mask 3 and the gap  $g_c$  at the center part of the substrate 2 becomes equal to the gaps  $g_p$  and  $g_s$  at the peripheral parts. Then the mask 3 is irradiated with exposure light from above to print the wiring pattern of the mask 3 on the substrate 2.



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